PIVOT.

Artificial Intelligence and the Future of Work

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Labor Market Impacts, Distributional Risks, and Policy Responses in the European Union and China

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Executive Summary

AI diffusion is accelerating faster than labor-market adjustment

Aggregate employment remains resilient. The sharper effects are appearing inside jobs, career ladders, firms, and regions.

Artificial intelligence is diffusing rapidly through European workplaces. In 2025, 20.0% of EU enterprises with at least ten employees used one or more AI technologies, up from 13.5% in 2024. Adoption remains highly uneven: large firms and Northern European economies lead, while smaller firms and several Central and Eastern European member states remain well behind.

Worker-level use is broader than formal enterprise adoption suggests. A new EU-wide survey found that 30% of workers use AI tools at work, with text-related tasks such as writing and translation among the most common applications. This indicates that task exposure is spreading through both employer-provided systems and worker-initiated use.

China presents a different statistical picture. Official reporting emphasizes industrial scale, manufacturing integration, and strategic technology deployment rather than an EU-style all-sector enterprise adoption rate. In 2025, China's core AI industry exceeded RMB 1.2 trillion, the number of AI companies surpassed 6,200, and more than 30% of manufacturing enterprises above the designated-size threshold had adopted AI technologies.

THE CENTRAL FINDING

The near-term labor-market story is not broad-based job destruction. It is task reallocation, uneven productivity gains, and growing pressure on standardized work.

Aggregate labor-market indicators have so far remained resilient. The EU employment rate reached 76.1% in 2025 and unemployment stood at 6.0 %. China reported total employment of 724.04 million and an average surveyed urban unemployment rate of 5.2% in 2025. These indicators do not eliminate displacement risks, but they support a task-reallocation interpretation rather than an economy-wide collapse in employment.

The distributional risk is more immediate. AI complements experienced workers in judgment-intensive roles while automating parts of junior professional work, routine cognitive occupations, and repetitive production tasks. Without better training, transition support, and social insurance, the gains are likely to concentrate among larger firms, leading regions, capital owners, and workers whose skills are strongly complementary to AI.

Policy should therefore pursue two objectives at once: accelerate productivity-enhancing diffusion and strengthen adjustment capacity. Labor policy should focus on AI literacy, occupation-specific retraining, portable support, and safeguards for high-impact algorithmic management. Fiscal policy should lower adoption barriers for SMEs and lagging regions while tying public support to training, job redesign, and productive deployment rather than simple headcount reduction.

1. Evidence Base

Key statistics and data comparability

The EU and China can be compared directionally, but not through a single harmonized measurement system.

The EU benefits from harmonized statistics on enterprise technology use, labor-market outcomes, labor costs, and digital occupations. China publishes strong official data on aggregate employment, wages, industrial development, and manufacturing integration, but several equivalent enterprise and occupational series are not available on the same methodological basis.

HOW TO READ THE COMPARISON

Europe measures AI diffusion primarily through harmonized enterprise and worker surveys. China describes it primarily through industrial scale and manufacturing adoption.

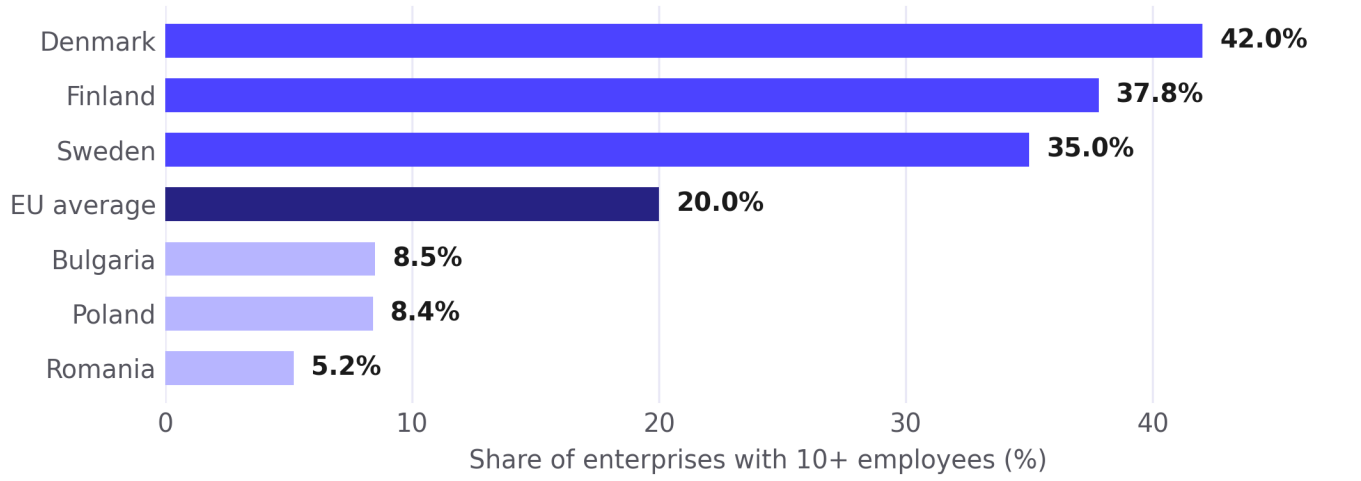

Figure 1 — Enterprise AI adoption across selected EU member states, 2025

Source: Eurostat, 2025 EU survey on ICT usage and e-commerce in enterprises.

Indicator	European Union	China	Comparability note
Enterprise AI adoption	20.0% of enterprises with 10+ employees used AI in 2025; 13.5% in 2024.	No single all-sector equivalent. Core AI industry exceeded RMB 1.2tn; 6,200+ AI companies; 30%+ of larger manufacturing enterprises adopted AI.	China indicators capture industrial scale and manufacturing adoption, not an EU-style enterprise survey.
Regional dispersion	Denmark 42.0%, Finland 37.8%, Sweden 35.0%; Romania 5.2%, Poland 8.4%, Bulgaria 8.5%.	Diffusion is concentrated among larger firms and major industrial and digital centers.	EU country data are harmonized; the China comparison is directional.
Worker-level AI use	30% of workers report using AI tools at work.	No directly comparable national worker-use survey was identified.	Material data gap on the China side.
Employment and unemployment	Employment rate 76.1% and unemployment rate 6.0% in 2025.	724.04 employed; surveyed urban unemployment averaged 5.2% in 2025.	Different concepts and reporting formats require caution.
Labor costs and wages	Average hourly labor cost €34.9 in 2025; non-wage costs 24.8%.	2025 annual average wage: RMB 129,441 in urban non-private units and RMB 71,590 in private units.	No directly comparable national hourly labor-cost measure.
ICT specialists	10.45m in 2025, equal to 5.0% of EU employment.	No Eurostat-style national occupational share identified.	Only partially comparable.

Table 1 — Headline indicators and data comparability

Sources: Eurostat; European Commission Joint Research Centre; National Bureau of Statistics of China; Ministry of Industry and Information Technology.

2. Diffusion

AI adoption is rising, but unevenly

Firm size, geography, sector, and measurement architecture shape what diffusion looks like.

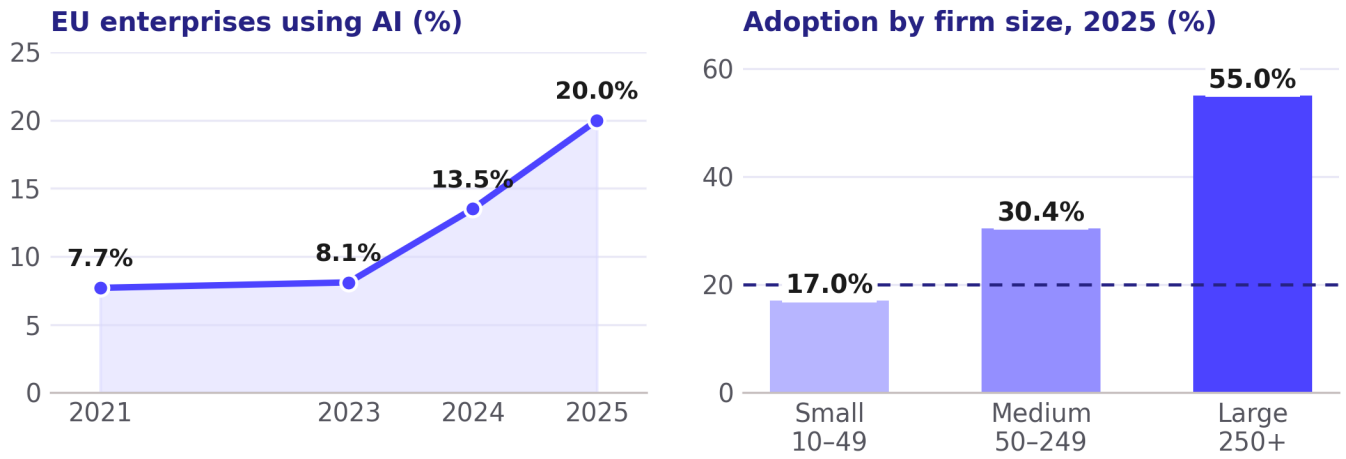

Figure 2 — EU enterprise AI adoption: overall trend and firm-size differences

Source: Eurostat. AI use was surveyed in 2021, 2023, 2024, and 2025; firm-size values refer to 2025. Dashed line: EU average (20.0%).

EU enterprise adoption accelerated in 2025

The share of EU enterprises with at least ten employees using AI increased by 6.5 percentage points in one year, from 13.5% in 2024 to 20.0% in 2025. Adoption rose across firm sizes, but scale remains decisive. Large enterprises were more than three times as likely as small enterprises to use AI.

The most common enterprise application was written-language analysis, used by 11.8% of enterprises. Image, video, or audio generation followed at 9.5%, while written or spoken language generation reached 8.8%. These figures show that generative and language-based applications are leading the first broad wave of deployment.

Worker-level use already exceeds formal deployment

The JRC survey found that 30% of EU workers use AI tools at work. Writing accounted for 65% of reported uses and translation for 59%, followed by data processing and discussing ideas. This matters because workers can adopt low-cost tools before their organizations classify AI as a formal enterprise technology investment.

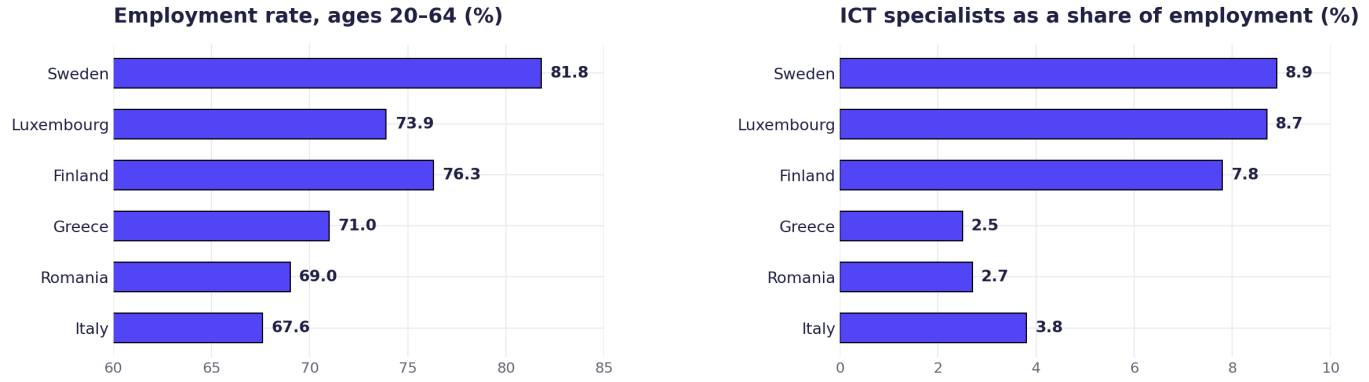

Figure 3 — Selected EU employment and ICT-specialist indicators, 2025

Source: Eurostat and national labor-market statistics. Countries selected to illustrate dispersion.

China's diffusion is fast but measured differently

China's official statistics frame AI through industrial scale, manufacturing deployment, and strategic technology policy. In 2025, the core AI industry exceeded RMB 1.2 trillion and the number of AI companies surpassed 6,200. More than 30% of manufacturing enterprises with annual main business turnover of at least RMB 20 million had adopted AI technologies by the end of 2025.

The aggregate figures point to rapid scale-up, especially in manufacturing and other digitally intensive activities. They should not, however, be treated as directly equivalent to Eurostat's enterprise survey. The denominator, sector coverage, and statistical purpose differ.

3. Adoption patterns

Formal adoption understates task-level exposure

The first wave of AI use raises worker productivity before it automates complete occupations.

Dimension	Value	Interpretation
All enterprises with 10+ employees	20.0%	AI moved from early adoption into broader diffusion in 2025.
Small enterprises, 10–49 employees	17.0%	Diffusion is rising, but the gap to larger firms remains wide.
Medium enterprises, 50–249 employees	30.4%	Adoption is almost twice the small-firm rate.
Large enterprises, 250+ employees	55.0%	AI is already mainstream among large firms.

Dimension	Value	Interpretation
Written-language analysis	11.8%	The most common enterprise AI application.
Image, video, or audio generation	9.5%	A leading generative use case.
Written or spoken language generation	8.8%	Language generation is part of the first broad adoption wave.

Table 2 — EU enterprise AI adoption by firm size and application, 2025

Source: Eurostat, 2025 EU survey on ICT usage and e-commerce in enterprises.

Many organizations still use AI for drafting, translation, summarization, search, data handling, and coding assistance rather than end-to-end automation. These deployments can reduce the time required for individual tasks without removing the occupation that contains them. This helps explain why worker exposure can rise quickly while aggregate employment changes slowly.

A US benchmark for early firm adoption

The US Census Bureau's Business Trends and Outlook Survey remains a useful benchmark for the early diffusion phase. Reported use rose from roughly 3.7% in September 2023 to around 5.4% by February 2024. Current data from the US Census Bureau's Business Trends and Outlook Survey shows that overall, AI usage hovered between 17% to 20% and that between 20% to 23% of businesses expected to be using it in the next six months of 2026. The measure is not directly comparable with Eurostat's enterprise survey, but it reinforces two observations: adoption can increase rapidly, and worker use can outpace formal business deployment.

The **PIVOT.** view

The relevant unit of analysis is increasingly the task, not the job title.

A job is a bundle of activities with different technical, relational, and institutional characteristics. AI can automate first drafts, routine review, scheduling, coding scaffolds, or quality inspection while leaving accountability, client interaction, physical action, and judgment with workers. The economic effect depends on how organizations redesign the remaining bundle.

This distinction also changes what should be monitored. Headcount alone will reveal adjustment late. Earlier indicators include entry-level vacancies, task composition, time spent on review, team size, training intensity, internal mobility, and the distribution of productivity gains between workers and firms.

4. Labor market outcomes

Aggregate employment has held up

The sharper near-term effect is polarization across tasks, career stages, and organizational models.

The most important aggregate fact is resilience. In the EU, employment reached a record level in 2025 and unemployment stood at 6.0%. China's surveyed urban unemployment averaged 5.2% in 2025 while total employment stood at 724.04 million. Rising AI exposure has therefore not yet produced broad-based job loss at the level of the overall economy.

This is consistent with a task-reallocation phase. AI currently performs best when accelerating defined parts of work: drafting, sorting, prediction, coding assistance, quality inspection, transcription, translation, or customer-service triage. These gains can lower demand for particular activities without immediately eliminating the occupation.

The main near-term effect is polarization

The relevant fault line increasingly runs through task content and career stage rather than broad skill labels alone. Experienced professionals in management, engineering, software, analytics, and other judgment-intensive roles often benefit from complementarity. More standardized junior work in software development, legal services, consulting, and other document-heavy fields is more directly exposed because AI can handle first drafts, research synthesis, document review, and coding scaffolds.

Routine cognitive occupations remain strongly exposed because their tasks are easier to codify and standardize. Repetitive manual work faces pressure where AI combines with robotics, machine vision, predictive maintenance, and workflow optimization. In-person services remain more resilient in the short term where local presence, physical dexterity, and direct interaction remain essential.

Group	Main AI channel	Likely labor-market effect	Examples
High-skill cognitive	Complements senior judgment; automates standardized junior tasks.	Mixed: productivity and wage gains for experienced workers; weaker entry-level demand in some occupations.	Software, engineering, legal strategy, consulting, finance.
Mid-skill routine cognitive	Automates standardized information processing, drafting, reporting, and customer handling.	Strong substitution pressure; role redesign, smaller teams, flatter ladders.	Administration, bookkeeping, standard compliance, call centers.
Mid-skill routine manual	Combines with robotics, machine vision, predictive maintenance, and workflow optimization.	Pressure on repetitive tasks; higher demand for technicians and supervisors.	Assembly, inspection, packaging, warehouse operations.
Lower-skill in-person service	Limited direct automation where tasks stay physical, local, or relational.	More resilient near term; indirect pressure through platforms and wage competition.	Care, hospitality, cleaning, food service, local logistics.

Table 3 — Sector and skill-group exposure matrix
Source: Pivot analysis based on the cited evidence base.

5. Distribution

Career ladders may change before occupations disappear

Entry-level hiring, wage progression, and the allocation of productivity gains are emerging pressure points.

Recent research suggests that early-career workers in highly AI-exposed occupations may already face weaker employment outcomes relative to more experienced workers. Software development is among the prominent examples. Evidence from professional services also shows rapid AI use in research, drafting, document review, summarization, and compliance tasks.

The implication is not that high-skill occupations disappear. It is that the traditional apprenticeship model may weaken when AI performs the tasks through which junior workers once learned. Pyramid-shaped firms can become flatter, fewer entry-level workers may support each experienced professional, and progression may depend more heavily on workers' ability to supervise AI-supported workflows.

A STRUCTURAL RISK

If the first rung of a career ladder is automated, the long-term problem is not only fewer junior jobs. It is how future experts acquire judgment.

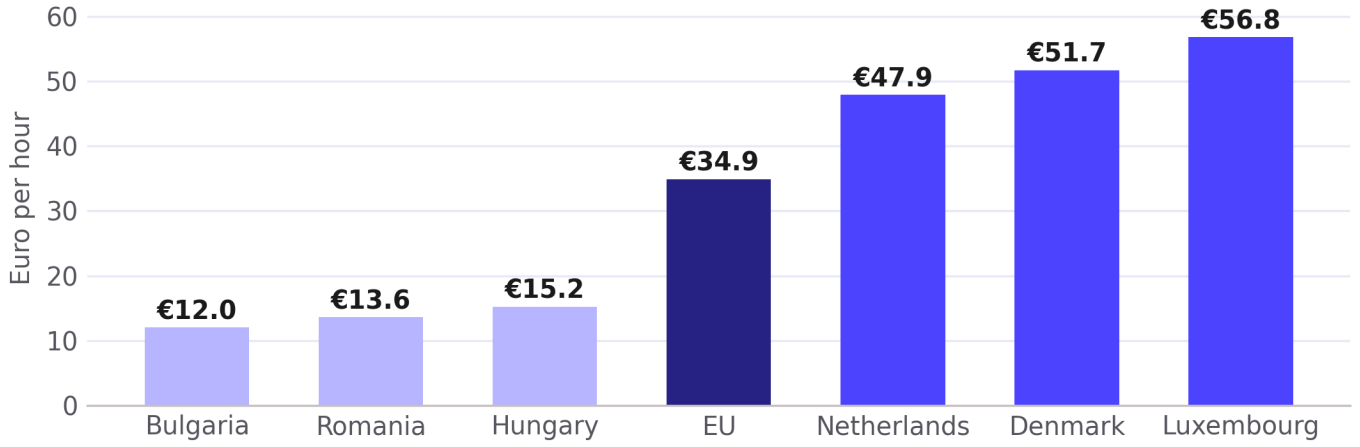

Figure 4 — Hourly labor costs across selected EU economies, 2025

Source: Eurostat. Whole-economy estimates excluding selected activities under the methodology.

Wages and labor costs

Average hourly labor costs reached €34.9 in the EU in 2025, with large differences between member states: €12.0 in Bulgaria and €56.8 in Luxembourg. Non-wage costs represented 24.8% of total labor costs. High labor costs strengthen the business case for automation in routine work, but they also increase the payoff from AI that helps firms expand output and improve quality.

China's wage structure differs. In 2025, the average annual wage was RMB 129,441 in urban non-private units and RMB 71,590 in private units. These are not directly comparable with an EU hourly labor-cost measure. They nevertheless illustrate a wide institutional and sectoral variation in which firms face different incentives to automate standardized activities.

Labor share and distributional pressure

The labor share of income has not yet collapsed. The direction of future pressure depends on how AI is deployed. If AI complements workers and supports output expansion, labor income can grow alongside productivity. If deployment mainly substitutes for middle-income work while ownership gains accrue to capital and a narrow high-skill group, both functional and interpersonal inequality can widen.

6. Skills

The constraint is applied capability, not only frontier talent

Large-scale diffusion requires managers, technicians, implementers, and workers who can redesign and operate AI-enabled processes.

Europe's skills bottleneck

In 2025, 10.45 million people worked as ICT specialists in the EU, equal to 5.0% of total employment. The share has continued to rise, but growth in the number of specialists slowed to 2.6% between 2024 and 2025. Sweden, Luxembourg, and Finland had the highest shares, while Greece, Romania, and Italy had the lowest.

The capability gap extends beyond AI researchers. It includes data engineering, cloud systems, cybersecurity, implementation, process redesign, procurement, and digital project management. An organization can license advanced tools and still fail to capture productivity benefits if managers cannot redesign workflows or workers cannot evaluate outputs.

China's scale-up challenge

China's challenge is to align a fast industrial deployment agenda with a sufficiently broad skills pipeline. Manufacturing integration requires software talent, but also production engineers, equipment technicians, operators, and vocationally trained workers who can supervise automated systems and respond when those systems fail.

Education and training policy therefore cannot be separated from industrial policy. Where deployment accelerates faster than complementary skills, firms bid up wages for a limited high-skill segment while relying more heavily on labor-saving automation elsewhere. The result can be higher productivity alongside wider internal inequality.

Four layers of applied capability

01
AI literacy
Use tools safely; recognize limits.

02
Applied use
Integrate AI into occupational tasks.

03
Workflow redesign
Reallocate tasks, controls, and accountability.

04
Technical stewardship
Evaluate systems, data, security, and performance.

The **PIVOT.** view

The decisive capability is not model access alone. It is the ability to redesign work while preserving judgment, accountability, and learning.

7. Policy Response

Mitigate harm while supporting productivity

The policy objective is not to slow useful diffusion. It is to widen access to its gains and reduce the cost of adjustment.

Labor policy priorities

- **Build universal AI literacy and occupation-specific upskilling pathways.** Workers in exposed occupations need short-cycle training tied to real sector demand.
- **Strengthen active labor-market policy.** Public employment services should identify exposed occupations early, provide transition counseling, and connect workers with employers and training providers.
- **Improve income protection during transitions.** Portable support and coverage for non-standard workers can reduce adjustment costs and support mobility into AI-complementary roles.
- **Keep high-impact employment decisions contestable.** Hiring, scheduling, performance monitoring, and dismissal systems should remain subject to meaningful human review and clear accountability.

Fiscal policy priorities

- **Subsidize complementary adoption rather than pure labor displacement.** Public support should be tied to training, job redesign, or measurable productivity-enhancing use cases.

- **Lower the fixed cost of adoption for SMEs.** Advisory support, shared testing environments, standard toolkits, and small implementation grants can prevent scale gaps from widening.
- **Support lagging regions.** Adjustment funding should target places with high exposure to routine-task displacement and limited internal capacity to finance retraining.
- **Tax gains through efficient profit and capital-income taxation.** Blunt robot taxes penalize productive investment. Recycle part of the revenue into skills and transition support.

Region-specific priorities

EUROPEAN UNION

Focus on diffusion quality: narrow adoption gaps, support SMEs, expand applied skills, and enforce employment safeguards without creating unnecessary administrative drag.

CHINA

Pair industrial acceleration with stronger adjustment mechanisms: improve portability and coverage, expand vocational training in AI-intensive manufacturing regions, and strengthen support for lagging areas.

8. Conclusion

Who captures the gains, and who bears the adjustment cost?

That is the central labor-market question raised by the current phase of AI diffusion.

The evidence to date suggests that AI is changing labor markets less through immediate aggregate job loss than through differential effects across tasks, career stages, firms, sectors, and regions. The EU shows rapid diffusion at both enterprise and worker level. China is scaling AI through industrial policy and manufacturing integration, but its public indicators are not directly comparable with the EU's harmonized surveys.

In both economies, the first-order economic gains can be large. AI can raise output, improve quality, speed up administrative work, and help firms respond to labor shortages. The distribution of those gains, however, will depend on whether workers receive complementary skills, whether smaller firms can adopt effectively, and whether social institutions support transitions when tasks or jobs disappear.

Career ladders deserve particular attention. When AI automates standardized junior work, it can improve short-term productivity while weakening the route through which workers acquire experience. Employers, educators, and policymakers will need new forms of supervised practice, assessment, and progression that do not depend on preserving low-value work for its own sake.

> **AI can support growth without large social dislocation, but only if diffusion policy and adjustment policy advance together.**

The policy choice is therefore not between adoption and protection. Productive adoption requires capable workers, credible institutions, and social acceptance. Adjustment systems are not a cost added after technological change. They are part of the infrastructure that allows economies to move faster without leaving the gains narrowly concentrated.

What to monitor next

- Entry-level hiring and vacancy trends in highly exposed professional occupations.
- Changes in task composition, team size, supervision, and internal learning models.
- Adoption gaps by firm size, region, sector, and workforce skill profile.

- Worker access to training and the mobility of displaced or redesigned roles.
- The distribution of productivity gains across wages, profits, prices, and working time.
- The use of algorithmic management in hiring, scheduling, monitoring, evaluation, and dismissal.

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